RPE 19÷44 - HPE 18÷40

Water chillers and air/water heat pumps with axial fans

Technical and construction characteristics

The chillers and heat pumps of the RPE - HPE series are designed for outdoor installation, in residential and commercial uses.
The range uses R410A refrigerant which ensures high performance with low energy consumption and is made up of various models in chiller and heat pump versions, with cooling capacities from 18 to 44 kW and with heating capacities from 20 to 45 kW.
The finned pack exchangers have been optimized for R410A and use 8 mm copper tubes which allow better heat exchange and silent operation of the fans.
Their generous sizing guarantees the production of chilled water even with external air temperatures of 51 °C. In the RPE 44 model, with double compressor on the same refrigeration circuit, the working range is further extended and efficiency at partial loads increased.
In fact, in particularly harsh conditions, the microprocessor control activates partialized operation, doubling the condensing surface available to the single compressor. The self-adaptive logic allows you to automatically adjust the set point based on the external temperature to reduce consumption and extend the working range.
Operation in systems with low water content is possible even without the use of a storage tank thanks to the automatic regulation which limits the number of compressor starts, thus increasing its duration over time. The exclusive Smart Defrost System (optional with advanced controller) is able to correctly identify the deterioration in the performance of the external exchanger due to the formation of ice and allows the process time to be minimized compared to the regular operation of the unit.

GAS ECOLOGICO


VENTILATORI ASSIALI

COMPRESSORE SCROLL


COMPRESSORE ROTATIVO


ESECUZIONE MONOBLOCCO

Model	Thermal Power kW	Cooling Power kW	Version STANDARD Code	Version HYDRO Code	Version STANDARD €	Version HYDRO €
RPE 19 just cold	-	19,90	37990000	37990015	11.040,00	11.790,00
RPE 23 just cold	-	23,40	37990001	37990016	12.120,00	12.880,00
RPE 28 just cold	-	26,00	37990003	37990018	13.260,00	14.010,00
RPE 32 just cold	-	31,90	37990004	37990019	17.040,00	18.100,00
RPE 35 just cold	-	35,90	37990005	37990020	18.200,00	19.550,00
RPE 44 just cold	-	42,50	37990007	37990022	22.670,00	24.020,00
HPE 18 hot/cold	20,10	16,70	37990008	37990023	10.330,00	11.100,00
HPE 20 hot/cold	23,90	20,80	37990009	37990024	11.910,00	12.670,00
HPE 24 hot/cold	27,30	23,20	37990010	37990025	13.280,00	14.030,00
HPE 28 hot/cold	31,40	27,40	37990011	37990026	15.290,00	16.350,00
HPE 32 hot/cold	35,80	30,80	37990012	37990027	16.500,00	17.560,00
HPE 35 hot/cold	39,30	34,10	37990013	37990028	18.200,00	19.260,00
HPE 40 hot/cold	44,30	38,80	37990014	37990029	20.520,00	21.580,00

Accessories RPE 19÷44 - HPE 18÷40

			Code	€
	Compressor compartment sound-absorbing insulation	**RPE/HPE 18/24** **RPE/HPE 28/44**	**37990030** **37990040**	**135,00** **248,00**
	Refrigerant pressure gauge		**37990031**	**166,00**
	Battery protection grille	**RPE/HPE 18/28** **RPE/HPE 32/44**	**37990033** **37990039**	**242,00** **417,00**
	Soft start	**RPE/HPE 18/44**	**37990032**	**2.072,00**
	Compressor crankcase electrical resistance	**RPE/HPE 18/44**	**37990034**	**265,00**
	Controllo remotoRemote control remote user interface for basic commandremote user interface for basic command		**37990035**	**161,00**
	Rubber vibration dampers	**RPE/HPE 18/24** **RPE/HPE 28/44**	**37990037** **37990038**	**158,00** **276,00**

Main components RPE 19÷44 - HPE 18÷40

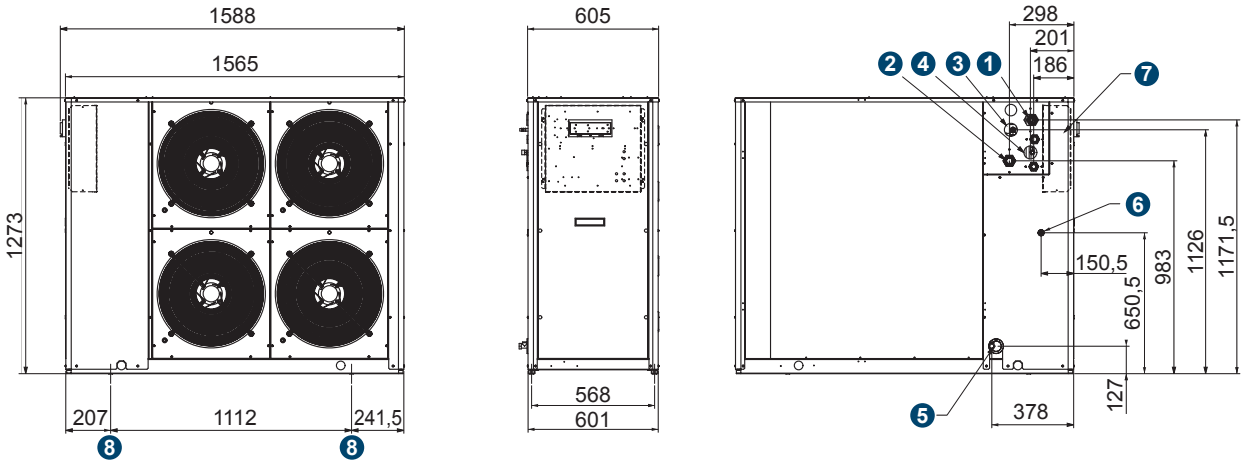
Structure
Galvanized and painted sheet metal carpentry (RAL9002) for effective resistance to corrosive agents and pleasant aesthetics.
The fixing systems are made of non-oxidizable carbon steel materials with passivation surface treatments.

Customized hydronic kits
The structure can accommodate hydronic kits with pump, expansion tank and storage tank.
High head pump made entirely of stainless steel already set up for use with mixtures of water and ethylene glycol up to 35% and equipped with internal thermal protection.

Fan motor unit
Electric fan with external rotor motor directly keyed to the axial fan, with internal thermal protection on the windings.

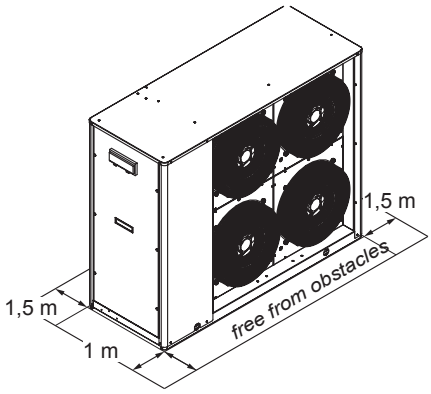
Finned pack heat exchanger
Made of 8 mm diameter copper tube and aluminum fins.
The particular design criterion of the exchangers allows the defrost phases to be speeded up as much as possible in the heat pump versions with clear benefits on seasonal efficiency during heating operation.

Dimensions RPE - HPE 18÷24

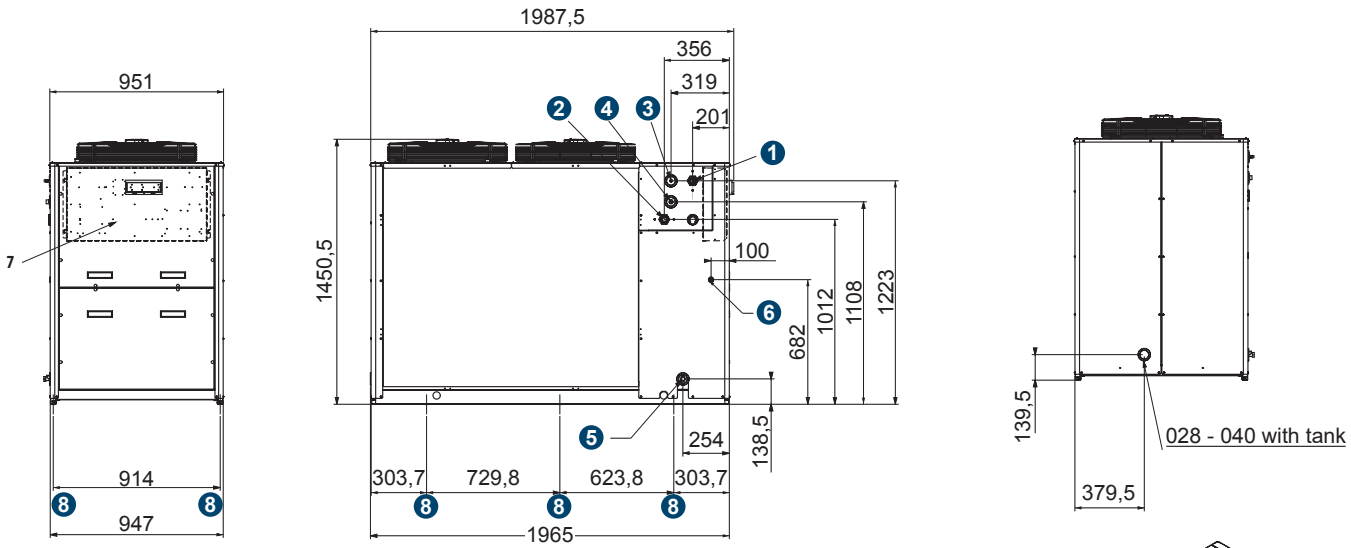


Values in mm

1 1” 1/4 female water inlet
2 1” 1/4 female water outlet
3 Safety valve drain with hose holder
4 Water supply 1/2” male (optional tap)
5 Water drain 1/2” female
6 Electrical supply Ø 28 mm
7 Electrical panel
8 Anti-vibration pads

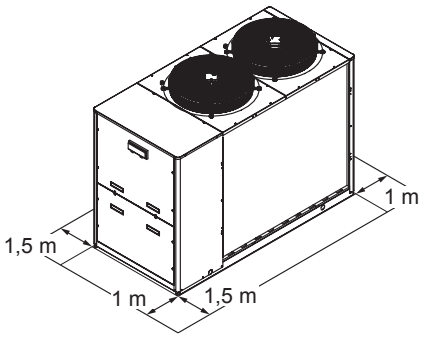


Dimensions RPE - HPE 28÷44



Values in mm

1 1” 1/4 female water inlet
2 1” 1/4 female water outlet
3 Safety valve drain with hose holder
4 Water supply 1/2” male (optional tap)
5 Water drain 1/2” female
6 Electrical supply Ø 37 mm
7 Electrical panel
8 Anti-vibration pads



Chiller technical data table RPE 19÷44

DESCRIPTION	U.M.	RPE 19 only cold	RPE 23 only cold	RPE 28 only cold	RPE 32 only cold	RPE 35 only cold	RPE 44 only cold
Refrigeration power (1)	kW	19,9	23,4	26,0	31,9	35,9	42,5
Total absorbed power (1)	kW	7,80	8,70	8,90	10,70	12,80	15,00
E.E.R. (1)	W/W	2,56	2,68	2,94	2,97	2,79	2,83
S.E.E.R. (2)	W/W	4,10	4,10	4,10	4,10	4,11	4,10
Water flow rate (1)	l/h	3435	4041	4480	5489	6181	7320
Water side pressure drops (1)	kPa	52	48	35	34	42	37
Low pump useful head prev. OR (1)	kPa	111	92	96	126	101	98
Max current absorbed	A	32,0	39,0	40,0	44,0	48,0	44,0
Inrush current	A	85	95	96	100	116	164
Starting current with soft starter	A	65	73	74	78	90	123
Power supply		400V/3+N/50Hz					
Compressors / Circuits	n.	2 / 1					
Expansion vessel capacity	dm^3	5	5	5	8	8	8
Tank capacity	dm^3	50	50	50	125	125	125
Sound power level (3)	dB(A)	72	73	73	73	73	74
Net weight	Kg	232	256	260	448	484	521
Operating weight	Kg	282	306	309	555	591	663

(1) External air temperature 35 °C, water temperature 12 °C / 7 °C (EN14511:2013)
(2) The efficiency values η in heating and cooling are calculated respectively with the following formulas: [η=SCOP / 2.5 - F(1) - F(2)] and [η=SEER / 2.5 - F (1) - F(2)](
3) Determined from measurements carried out in accordance with ISO 9614

Technical data table for chillers and heat pumps RPE - HPE 18÷40

DESCRIPTION	U.M.	HPE 18 hot/cold	HPE 20 hot/cold	HPE 24 hot/cold	HPE 28 hot/cold	HPE 32 hot/cold	HPE 35 hot/cold	HPE 40 chot/cold
Cooling power (1)	kW	16,7	20,8	23,2	27,4	30,8	34,1	38,8
Ttl absorbed power (1)	kW	6,40	7,80	8,20	8,80	10,20	11,70	12,90
E.E.R. (1)	W/W	2,61	2,66	2,83	3,11	3,02	2,91	3,00
S.E.E.R. (2)	W/W	3,17	3,14	3,32	3,71	3,58	3,58	3,66
Water flow (1)	l/h	2886	3592	4000	4722	5309	5873	6686
Water side pressure drops (1)	kPa	49	57	47	39	49	39	42
Low pump useful head prev.OR (1)	kPa	130	109	109	139	120	126	115
Thermal power (3)	kW	20,1	23,9	27,3	31,4	35,8	39,3	44,3
Ttl absorbed power (3)	kW	6,80	8,00	8,30	9,30	10,70	11,80	13,40
COP (3)	W/W	2,94	2,99	3,28	3,37	3,34	3,34	3,31
SCOP (2)	W/W	3,22	3,22	3,44	3,60	3,64	3,70	3,64
Efficiency class energy in heating.(4)		A+	A+	A+	A+	A+	A+	A+
Water flow (3)	l/h	3479	4139	4720	5438	6190	6809	7675
Water side pressure drop (3)	kPa	70	75	63	50	64	51	53
Low pump useful head prev. OR (3)	kPa	116	93	106	134	113	118	111
Max current absorbed	A	22,0	24,0	26,0	32,0	34,0	38,0	40,0
Inrush current	A	76	105	159	134	166	162	164
Starting current with softstarter	A	51	72	110	91	114	111	112
Power supply		400V/3+N/50Hz						
Compressors/Circuits	n.	1/1	1/1	1/1	1/1	1/1	1/1	1/1
Expansion vessel capacity	dm^3	5	5	5	8	8	8	8
Tank capacity	dm^3	50	50	50	125	125	125	125
Sound level (5)	dB(A)	71	71	72	73	73	73	75
Net weight	Kg	265	281	297	427	456	487	516
Operating weight	Kg	301	317	333	534	563	595	624

(1) External air temperature 35 °C, water temperature 12 °C / 7 °C (EN14511:2013)
(2) The efficiency values η in heating and cooling are calculated respectively with the following formulas: [η=SCOP / 2.5 - F(1) - F(2)] and [η=SEER / 2.5 - F (1) - F(2)]
(3) Outdoor air temperature 7 °C, dry bulb / 6.2 °C wet bulb, water temperature 40 °C / 45 °C (EN14511:2013)
(4) Seasonal energy efficiency class of LOW TEMPERATURE space heating in AVERAGE climate conditions [REGULATION (EU) No. 811/2013]
(5) Determined from measurements carried out in accordance with ISO 9614